

Date: Friday, 12/9/2005 11:45:47 AM
User: Kim Johnston

Process Sheet

Customer	: CU-DAR001 Dart Helicopters Services	Drawing Name	: WEARPAD
Job Number	: 25183		
Estimate Number	: 11347		
P.O. Number	: <i>N/A</i>	Part Number	: D33399
This Issue	: 12/9/2005 S.O. No. : <i>N/A</i>	Drawing Number	: D3339 REV B
Prsht Rev.	: NC	Project Number	: N/A
First Issue	: 12/9/2005 Type : PURCHASED PARTS	Drawing Revision	: B
Previous Run	: <i>N/A</i>	Material	: <i>N/A</i>
Written By	: <i>See comment below</i>	Due Date	: 12/23/2005
Checked & Approved By	: <i>See comment below</i>	Qty:	24 Um: Each
Comment	: Est Rev:A New Issue 05-11-10 EC		

Additional Product

Job Number:



Seq. #:	Machine Or Operation:	Description :
---------	-----------------------	---------------

1.0	PG	PURCHASING
-----	----	------------



Comment: Issue P/O: *00000267* *05/12/12*
E-mail or Ship DXF file to vendor
Laser cut flat pattern as per Dwg
Possible supplier: Ind. Laser
Material release note is required.

2.0	D33399F	Wearpad
-----	---------	---------



Comment: Qty.: 1.0000 U(s)/Unit Total : 24.0000 U(s)
WEARPAD-FLAT

3.0	PACKAGING 1	PACKAGING RESOURCE #1
-----	-------------	-----------------------



Comment: PACKAGING RESOURCE #1
Receive & Inspect For Transit Damage
Ensure material certification is attached

4.0	QC6	DIMENSIONAL CHECK
-----	-----	-------------------



Comment: DIMENSIONAL CHECK

5.0	BRAKE NC	NC BRAKE
-----	----------	----------



Comment: NC BRAKE

1-Deburr if necceray

2-Form as per Dwg D3339 using DT8326 and DT8261

DL 05/12/30 24

23 *23*

23 04/01/04

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector
06-01-04	4	Took 1 for inspection template Identify AS DT8827	<i>[Signature]</i>	06-01-04	1	<i>[Signature]</i>	<i>[Signature]</i> 06-01-04

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes ☒ No ☐ DQA: *[Signature]* Date: 06/01/16
 QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Date: Friday, 12/9/2005 11:45:47 AM
User: Kim Johnston

Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: WEARPAD

Job Number: 25183

Part Number: D33399

Job Number:



Seq. #:

Machine Or Operation:

Description:

6.0

QC5

INSPECT WORK TO CURRENT STEP



206-01-04 23

Comment: INSPECT WORK TO CURRENT STEP

7.0

LARGE FAB 1

LARGE FABRICATION RESOURCE 1



Comment: LARGE FABRICATION RESOURCE 1

1-Weld Hard coat 7560 per Dwg D3339, use DT8210 & DT8810 Layout Jig

A/R

7560 Hardcoat

Batch:

M19174

CPL

06-01-08

23

8.0

QC9

VISUAL WELDING INSPECTION



Comment: VISUAL WELDING INSPECTION

PD

06-01-10

23

9.0

POWDER COATING

POWDER COATING



Comment: POWDER COATING

Powder Coat Grey Sandtex (Ref: 4.3.5.6) as per QSI 005 4.3

MA

06 01 12

23

10.0

QC3

INSPECT POWDER COAT/CHEMICAL CONVERSION



Comment: INSPECT POWDER COAT/CHEMICAL CONVERSION

C2 06/01/13

23

11.0

PACKAGING 1

PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1

Identify and Stock

Location: 419

C2

06/01/13

23

12.0

DC

DOCUMENT CONTROL



Comment: DOCUMENT CONTROL

Inspection Level 21

DD

06/01/16

23

Job Completion



u

06-01-13

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

QA: N/C Closed: _____ Date: _____

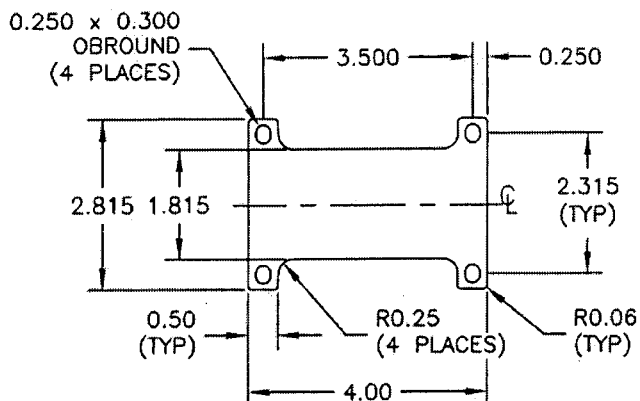
NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

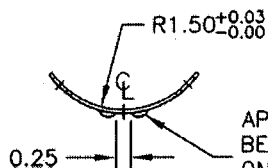


RELEASED
05-11-27

DESIGN MB	DRAWN BY MB	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED <i>[Signature]</i>	APPROVED <i>[Signature]</i>	DRAWING NO. D3339	REV. B SHEET 1 OF 3
DATE 05.11.22		TITLE REPLACEMENT WEARPAD	SCALE 1:3
A	05.06.06	NEW ISSUE	
B	05.11.22	CORRECTED HOLE SPACING D3339-7F	



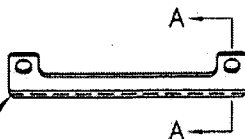
D3339-1F FLAT PATTERN



SECTION A-A

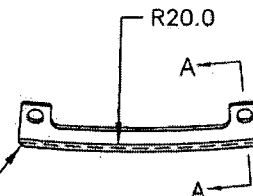
APPLY 7560 HARDCOAT WELD BEADS, 0.063 TO 0.125 THICK, ON BOTTOM SURFACE AFTER FORMING

APPLY 7560 HARDCOAT WELD BEADS PER DT3339-3T1 AFTER FORMING (SEE SECTION A-A)



D3339-3 CENTER WEARPAD
(MADE FROM D3339-1F)

APPLY 7560 HARDCOAT WELD BEADS PER DT3339-5T1 AFTER FORMING (SEE SECTION A-A)



D3339-5 FORWARD WEARPAD
(MADE FROM D3339-1F)

D3339-1F/-3/-5 WEARPAD

NOTES:

- 1) MATERIAL: AISI 1010-1025 OR ASTM A36/A366/A1008 OR CSA G40-21, 38W/44W/50W/60W/70W SERIES COLD ROLLED STEEL 16 GAUGE (0.060 THICK)
- 2) PART IS SYMETRICAL ABOUT CENTER LINE
- 3) WELD PER DART QSI 004
- 4) FINISH: POWDER COAT GREY SANDTEX (REF. 4.3.5.6) PER DART QSI 005
- 5) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 6) ALL DIMENSIONS ARE IN INCHES
- 7) BREAK ALL SHARP CORNERS 0.063 MAX



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WITHOUT NOTICE

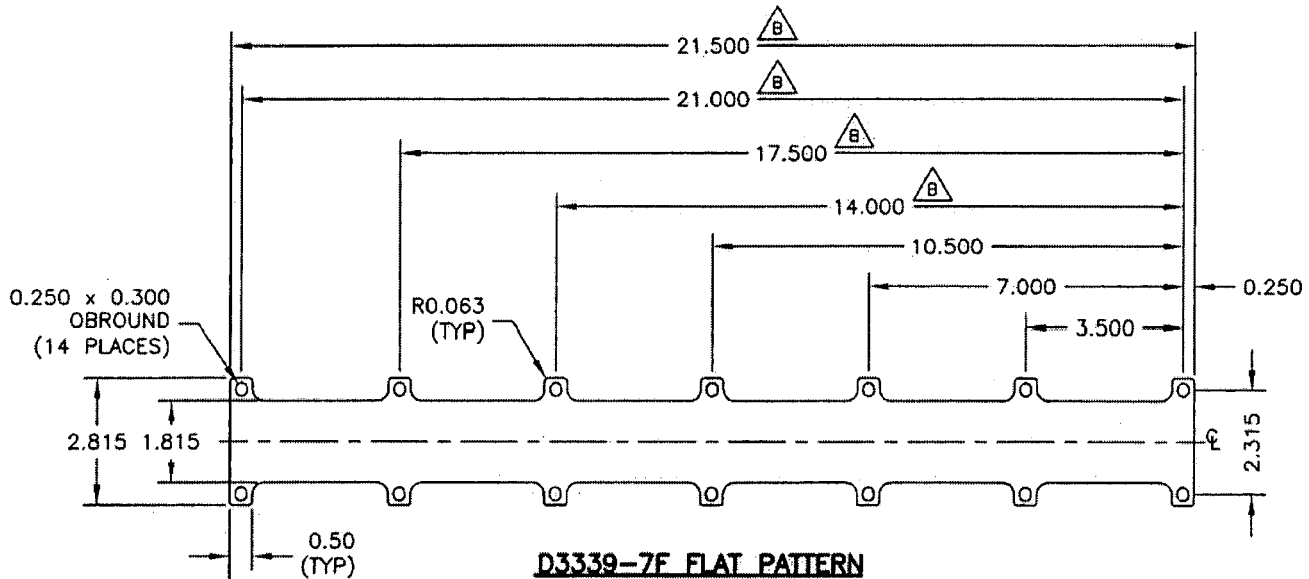
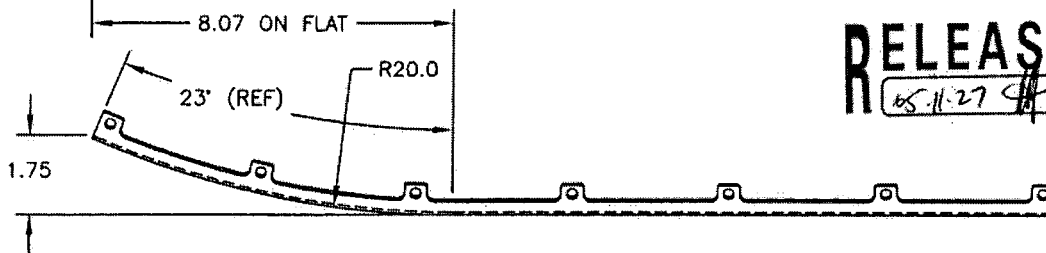
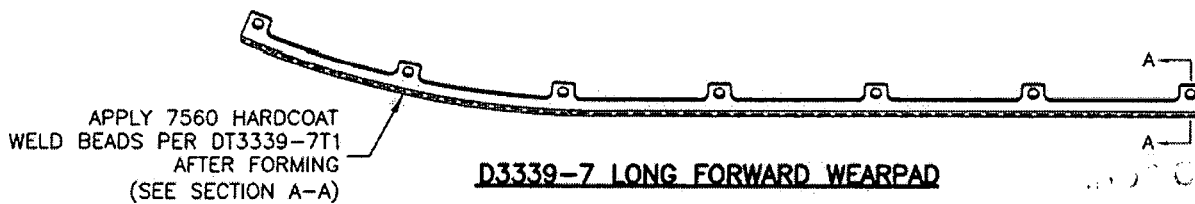
WORK ORDER
NO. 25183

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DART

DESIGN MB	DRAWN BY MB	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED 	APPROVED 	DRAWING NO. D3339	REV. B SHEET 2 OF 3
DATE 05.11.22	TITLE REPLACEMENT WEARPAD		SCALE 1:4

**D3339-7F FLAT PATTERN****D3339-7B LONGITUDINAL BEND****RELEASED**
05.11.27**D3339-7 LONG FORWARD WEARPAD****NOTES:**

- 1) MATERIAL: AISI 1010-1025 OR ASTM A36/A366/A1008 OR CSA G40-21, 38W/44W/50W/60W/70W SERIES COLD ROLLED STEEL 16 GAUGE (0.060 THICK)
- 2) PART IS SYMETRICAL ABOUT CENTER LINE
- 3) WELD PER DART QSI 004
- 4) FINISH: POWDER COAT GREY SANDTEX (REF. 4.3.5.6) PER DART QSI 005 4.3
- 5) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 6) ALL DIMENSIONS ARE IN INCHES
- 7) BREAK ALL SHARP CORNERS 0.063 MAX

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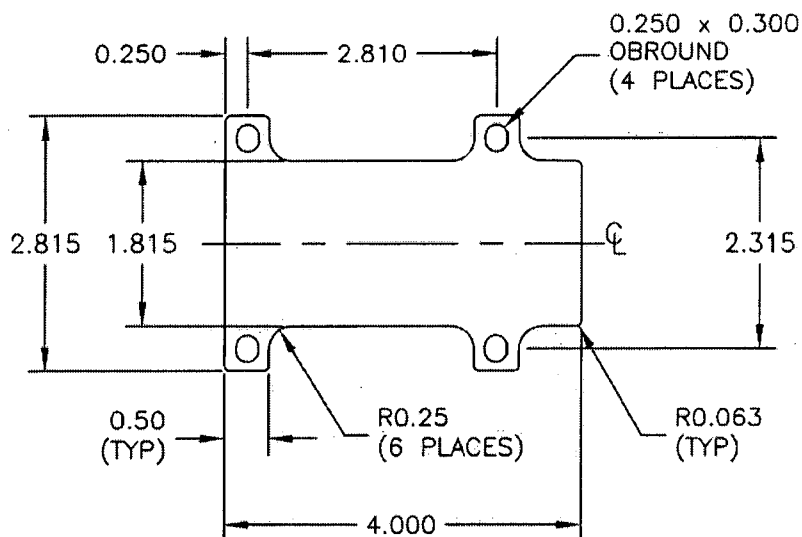
WORK ORDER
no 25183

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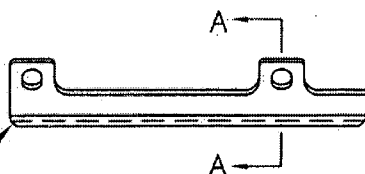


DESIGN MB	DRAWN BY MB	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED #	APPROVED #	DRAWING NO. D3339	REV. B SHEET 3 OF 3
DATE 05.11.22	TITLE REPLACEMENT WEARPAD		SCALE 1:2



D3339-9F FLAT PATTERN

APPLY 7560
HARDCOAT WELD BEADS
PER DT3339-9T1
AFTER FORMING
(SEE SECTION A-A)



D3339-9 AFT WEARPAD

NOTES:

- 1) MATERIAL: AISI 1010-1025 OR ASTM A36/A366/A1008 OR CSA G40-21, 38W/44W/50W/60W/70W SERIES COLD ROLLED STEEL 16 GAUGE (0.060 THICK)
- 2) PART IS SYMETRICAL ABOUT CENTER LINE
- 3) WELD PER DART QSI 004
- 4) FINISH: POWDER COAT GREY SANDTEX (REF. 4.3.5.6) PER DART QSI 005 4.3
- 5) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 6) ALL DIMENSIONS ARE IN INCHES
- 7) BREAK ALL SHARP CORNERS 0.063 MAX

RELEASED
05.11.27

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01/18/05 TUE 15:50 FAX 804 272 0861
INTEGRIS METALS
+++ MTR MINNEAPOLIS 2010

90229754
INSPECTION CERTIFICATE
MATERIAL TEST/INSPECTION CERTIFICATES

YEH MAU CORP.
YEN MAU CORP.

INVOICE NO. :
COMMODITY :
FORM 1665
PRIME COLD ROLLED STAINLESS STEEL SHEET AISI 304 NO.4 (SI)
FINISH, WITH 100 MOC FILM ON MAIN SIDE, WITH BACK PASS,
SLITTED EDGE AISI 304, 2B FINISH, WITH PAPER INTERLEAVED,
SLITTED EDGE.

工廠: 嘉年華路竹塹安路345號
345, SHUN AN RD. LU CHU SIANG
KACHUNG TAIWAN R.O.C.
TEL: (07) 872445 FAX: (07) 872006
CERTIFICATE NO: 9011182
DATE OF ISSUE: 11/24/2004

SPECIFICATION :
CUSTOMER :
INTEGRIS METALS LTD

DESCRIPTION :		CUSTOMER :		INTEGRIS METALS LTD		Physical Properties					Chemical Composition								
(ITEM NO) SIZE	NO.	Weight (N.W.)		Heat No.	ID NO.	Tensile Test GL-50 mm					(%)								
		KGS	LBS			YS (N/mm ²)	TS (N/mm ²)	EL (%)	HRB	HV	C x100	SI x100	Mn x100	P x1000	S x1000	Ni x100	Cr x100	N x100	
AISI 304 2B (7425-4228)																			
24GA/48"X120"	1	1,465	3,230	YU231320	3AS44463B-21	258	685	56	81	156	4.8	51	119	24	2	804	1821	2.7	
24GA/48"X120"	1	1,464	3,228	YU231320	3AS44463B-22	258	685	56	81	156	4.8	51	119	24	2	804	1821	2.7	
(7425-5850)																			
22GA/48"X96"	1	1,464	3,228	YU230510	38S37600B-61	280	673	63	82	162	5.4	50	126	26	3	815	1819	2.4	
(7425-6850)																			
22GA/48"X120"	1	1,375	3,031	YU230510	38S37600B-62	280	673	63	82	162	5.4	50	126	26	3	815	1819	2.4	
(7425-8850)																			
18GA/48"X96"	1	1,445	3,186	YU134975	3AS43434A-1	312	666	61	82	161	4.1	49	112	24	2	809	1821	2.8	
(7426-2849)																			
18GA/48"X96"	1	1,497	3,300	YU231066	3AS42732-4	301	664	49	84	166	3.7	40	116	27	5	810	1824	3.7	
(7426-3619)																			
18GA/48"X120"	1	1,453	3,203	YU231066	3AS42732-6	301	664	49	84	166	3.7	40	116	27	5	810	1824	3.7	
18GA/48"X120"	1	1,455	3,206	YU231066	3AS42732-8	301	664	49	84	166	3.7	40	116	27	5	810	1824	3.7	
(7426-5169)																			
16GA/48"X120"	1	1,423	3,137	YU231143	3AS42866A-6	302	650	53	82	159	4.5	52	123	28	4	810	1822	2.7	
16GA/48"X120"	1	1,424	3,139	YU231143	3AS42866A-7	302	650	53	82	159	4.5	52	123	28	4	810	1822	2.7	
16GA/48"X120"	1	1,420	3,131	YU231143	3AS42866B-1	302	650	53	82	159	4.5	52	123	28	4	810	1822	2.7	
(7426-7949)																			
14GA/48"X96"	1	1,441	3,177	YU231075	3AS42917A-1	302	650	52	83	162	4.2	48	118	28	6	806	1813	3.4	
14GA/48"X96"	1	1,441	3,177	YU231075	3AS42917A-2	302	650	52	83	162	4.2	48	119	28	6	806	1813	3.4	
(7426-8059)																			
14GA/48"X120"	1	1,420	3,131	YU231075	3AS42917A-3	302	650	52	83	162	4.2	48	118	28	6	806	1813	3.4	
14GA/48"X120"	1	1,420	3,131	YU231075	3AS42917A-4	302	650	52	83	162	4.2	48	119	28	6	806	1813	3.4	
(7426-8240)																			
14GA/60"X96"	1	1,446	3,188	YU135202	3AS45623A-211	301	641	53	81	157	5.1	51	114	30	9	806	1822	3	
(7426-8277)																			
14GA/60"X120"	1	1,405	3,097	YU135202	3AS45623A-213	301	641	53	81	157	5.1	51	114	30	9	806	1822	3	
14GA/60"X120"	1	1,540	3,395	YU135202	3AS45623A-214	301	641	53	81	157	5.1	51	114	30	9	806	1822	3	

Remarks: NO MERCURY CONTAMINATION
WE HEREBY CERTIFY THAT THE MATERIAL DESCRIBED HEREIN HAS
BEEN MADE IN ACCORDANCE WITH THE RULES OF THE MILL CERTIFICATE.

Send test report for all Heat NO.
PRODUCT IN ACCORDANCE WITH ASTM A240, A480,
A362E, ASME SA240, Q35766D.

YIEN MAU CORP.
Yi Ma Hui
Manager of Quality Assurance

20 ga 304 455

(0.037)

po 267 196



New Zealand Steel Limited
Glenbrook, South Auckland
Postal: Private Bag 92121, Auckland, New Zealand
Telephones: (09) 375 8998 / 375 8111 Auckland
(09) 235 8089 / 235 3535 Wairakei
Fax: (09) 375 8959

TEST CERTIFICATE

Ref: 5210/22495

CUSTOMER	Wilkinson	P50323 DI001	SPECIFICATION	ASTMA1008 CS Type A	CERTIFICATE No	TC112397
CUSTOMER O/N	90-21N-686		PRODUCT	GRA WIDE COIL	PAGE	1 of 1
MILL O/N	480737		DIMENSIONS	0.055" x 48" x Coil	DATE	09 June 2005

PACK NUMBER	HEAT No	CHEMICAL COMPOSITION PERCENT															MECHANICAL TESTS (TEST SPECIFICATION - ASTM A370)							
		C	Si	Mn	P	S	Cu	Ni	Cr	Mo	V	Nb	Ti	Al	B	N2	CE ()	BEND	YIELD	T.S.	%ELONG	HARDNESS	r	LENGTH
		x100			x1000										x10000		x100	180°			G.L.=	HRB	()	(feet)
R9-459713-00	641758	4	TR	18	4	16	13	19	10	5	3	1	1					Good				54		1585
R9-459714-00	641758	4	TR	18	4	16	13	19	10	5	3	1	1					Good				54		1457
R9-459715-00	641513	5	TR	18	9	18	12	17	15	1	6	1	1					Good				48		1375
R9-459716-00	641513	5	TR	18	9	18	12	17	15	1	6	1	1					Good				48		1473
R9-459717-00	641756	5	TR	20	12	19	12	18	19	1	7	1	1					Good				48		1631
R9-459718-00	641756	5	TR	20	12	19	12	18	19	1	7	1	1					Good				48		1093
R9-459719-00	641756	5	TR	20	12	19	12	18	19	1	7	1	1					Good				50		1562
R9-459720-00	641756	5	TR	20	12	19	12	18	19	1	7	1	1					Good				50		1535
R9-460380-00	641761	4	TR	20	13	17	12	18	25	5	8	1	1					Good				50		1581
R9-460381-00	641758	4	TR	18	4	16	13	19	10	5	3	1	1					Good				49		1562
R9-460382-00	641758	4	TR	18	4	16	13	19	10	5	3	1	1					Good				49		1503
R9-461458-00	642309	2	TR	18	10	20	11	17	19	1	6	1	1					Good				48		1785

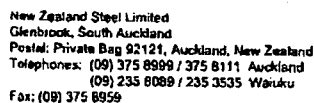
YIELD	GAUGE LENGTH (G.L.)	PLASTIC STRAIN RATIO (r)	IMPACT TEST	(C)=5mm x 5mm	CARBON EQUIVALENT VALUE (CE)
(A)=0.2% PROOF STRESS	(A)=200mm (C)=80mm (E)=2"	(A)=r0 (C)=r45	(A)=10mm x 10mm	(D)=2.5mm x 10mm	(A)=C+Mn/8
(B)=LOWER YIELD STRESS	(B)=50mm (D)=5.65 So (F)=8"	(B)=r90 (D)=(r0+90+2r45)/4	(B)=7.5mm x 10mm	(E)=5mm x 10mm	(B)=C+Mn/6+(Cr+V+Mo)/5+(Cu+Ni)/15
					(C)=C+Mn/6+Si/24
					(D)=

WE HEREBY CERTIFY THAT THE MATERIAL DESCRIBED HEREIN HAS BEEN TESTED AND INSPECTED WITH SATISFACTORY RESULTS IN ACCORDANCE WITH THE REQUIREMENTS OF THE ABOVE SPECIFICATION

APPROVED *Ratish Misra*
QC METALLURGIST

16 gms

POA 146, 267, 245,



Ref: 5379/23650

YIELD	GAUGE LENGTH (G.L.)		PLASTIC STRAIN RATIO (r)	IMPACT TEST	(C)=5mm x 5mm	CARBON EQUIVALENT VALUE (CE)	
(A)=0.2% PROOF STRESS	(A)=200mm	(C)=80mm	(E)=2"	(A)=10mm x 10mm	(D)=2.5mm x 10mm	(A)=C+Mn/8	(C)=C+Mn/6+Si/24
(B)=LOWER YIELD STRESS	(B)=50mm	(D)=5.65 √ S ₀	(F)=8"	(B)=7.5mm x 10mm	(E)=5mm x 10mm	(B)=C+Mn/8+(Cr+V+Mo)/5+(Cu+Ni)/15	(D)=

APPROVED

Satish Misra
DC METALLURGIST

2094 ~5

PO# 267, 146,